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E7.4-10817
CR 140619

Investigation Title: Utilization of Skylab (EREP) System
for Appraising Changes in Continental
Migratory Bird Habitat.

EREP Investigation No. 486

Period Covered: October 1974

NASA Contract No. T-4114B

Principal Investigations Management Office:

Lyndon B. Johnson Space Center
Houston, Texas 77058

Technical Monitor Name: Mr. R. E. Joosten

Principal Investigator and sponsoring institution name: "Made available under NASA sponsor
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semination of Earth Resources Survey
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for any use made thereof."

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U. S. Fish and Wildlife Service
Jamestown, North Dakota 58401

Type of Report: Monthly Progress

Overall Status:

Fiscal Year-74 funds have been exhausted and allocation of FY-75 funds to the ERIM subcontract have been delayed due to administrative problems. Consequently, no charges have been made during this reporting period although work on the investigation has continued. FY-75 funds are expected to be available beginning in the next reporting period.

Digital magnetic tapes 700564 and 700565 (S-192 data of 12 June 1973, track 61, EREP Site 866323) were evaluated during this report period. Tape 700564 was judged satisfactory, but tape 700565 was found to contain 32 parity errors and was judged unsatisfactory for further processing. This information was brought to the attention of the NASA/JSC technical monitor's office and the immediate production of a replacement tape is anticipated. Because the two tapes represent a contiguous set of data, it is not practical to commence processing of the one good tape without a satisfactory second tape. The appraisal of these tapes required 19 man-hours and 5.5 hours of computer time.

Film imagery (roll no. 906) of all 22 SD0's for the above specified S-192 data were received and reviewed. An evaluation of these imagery products is provided in the attached table. This evaluation indicated that good scene contrasts exist only in those bands in the 0.68 to 2.35 μ m range or the range frequently referred to as the near infrared. The quality of these data has been affected by the fact that the data were collected at approximately 0620 hours local solar time or about

(E74-10817) UTILIZATION OF SKYLAB (EREP)	N75-10543
SYSTEM FOR APPRAISING CHANGES IN	
CONTINENTAL MIGRATORY BIRD HABITAT	
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two hours after sunrise. It is not surprising that the shorter wavelength channels lacked contrast since illumination conditions were less than adequate. Data quality findings suggest that the mapping of surface water will be possible but that the mapping of vegetation may be seriously impaired.

Recommendations for Action:

Delivery of the replacement S-192 data tape as soon as possible.

Expected Accomplishments During the Next Reporting Period:

Further progress on this task is dependent upon the availability of the remaining S-192 CCT of data collected on 12 June 1973.

Significant Results:

None to report.

Summary Outlook:

A major processing effort will be undertaken in the processing and analysis of the S-192 digital data.

Travel Summary and Outlook:

No travel is contemplated during this next reporting period.

TABULATION OF CHARACTERISTICS OF S-192 FILM IMAGERY FOR DATA OF

12 June 1973, TRACK 61, EREP SITE 866323

<u>BAND</u>	<u>λ RANGE (μm)</u>	<u>SDO</u>	<u>IMAGERY CONTRAST</u>	<u>LOW FREQ. NOISE</u>	<u>NOISE BANDING*</u>	<u>1/f NOISE**</u>	<u>COMMENTS</u>
1	0.41 - 0.46	22	very poor	yes	yes	no	
2	0.46 - 0.51	18	poor	yes	yes	no	
3	0.52 - 0.56	1	poor to fair	yes	yes	no	some sync. dropout
	0.52 - 0.56	2	poor to fair	yes	yes	no	some sync. dropout
4	0.56 - 0.61	3	poor	yes	yes	no	some sync. dropout
	0.56 - 0.61	4	poor	yes	yes	no	some sync. dropout
5	0.62 - 0.67	5	very poor	yes	yes	no	
	0.62 - 0.67	6	very poor	yes	yes	no	
6	0.68 - 0.76	7	good	yes	no	yes	
	0.68 - 0.76	8	good	yes	no	yes	
7	0.78 - 0.88	9	good	no	no	no	
	0.78 - 0.88	10	good	no	no	no	
8	0.98 - 1.03	19	good	no	no	no	
9	1.09 - 1.19	20	good	no	no	no	
10	1.20 - 1.30	17	good	no	no	no	
11	1.55 - 1.75	11	good	no	no	no	
	1.55 - 1.75	12	good	no	no	no	
12	2.10 - 2.35	13	good	yes	no	no	some sync. dropout
	2.10 - 2.35	14	good	yes	no	no	some sync. dropout
13-2	10.2 - 12.5	15	very poor	yes	no	no	some sync. dropout
	10.2 - 12.5	16	very poor	yes	no	no	some sync. dropout
13-1	10.2 - 12.5	21	very poor	yes	yes	no	

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*Noise banding is noise occurring in phase with the scan frequency. In this case, it was evidenced by two cycles of alternate dark and light bands which occurred throughout the imagery parallel to the ground track.

MONTHLY
CONTRACTOR FINANCIAL MANAGEMENT REPORT

Contract Number: T-4114B

Contractor: Northern Prairie Wildlife Research Center
P. O. Box 1747
Jamestown, North Dakota 58401

Subcontractor: Environmental Research Institute of Michigan
P. O. Box 618
Ann Arbor, Michigan 48107

Total Estimated Cost: \$84,629.00

Task Description: Utilization of SKYLAB (EREP) System for
Appraising Changes in Continental Migratory
Bird Habitat
(Investigation Number 486)

Prepared by: David S. Gilmer DATE: November 1, 1974

	MOST RECENT MONTH OCTOBER 1974	CUMULATIVE TO DATE	ESTIMATED TOTAL
Hours:			
Investigator	--	1810	2090
Other	--	1510	1770
Total	--	3320	3860
Costs:			
Labor	--	42,200	44,064
Material	--	800	1,143
Data Processing	--	2,200	5,809
Travel	--	1,800	5,128
Equipment Rental	--	--	--
Equipment Purchase	--	--	--
All Other	--	4,400	28,485
Total	0	51,400	84,629